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STATE OF
OPPORTUNITY

Department of
Environmental
Conservation

New York Watercraft Inspection Steward Program App Update

Great Lakes Aquatic Nuisance Species Panel Meeting
May 15, 2019

Prevention: Data standardization and centralized database (WISPA)

Office of Parks, Recreation, and Historic Preservation; NYSDEC, and New York Natural Heritage Program (NYNHP) collaboration

The Survey

- Core of standardized questions
- Some customized questions as well
- Data can be saved in “outbox” until access to internet allows uploading to cloud

J. Clayton, NYSDEC

Some cost estimates

Average boat steward salary = $15,000 per season ($15/hour)

Samsung Galaxy Tab A (tablets + screen protector + case) = $100 to $150

J. Clayton, NYSDEC

More cost estimates

WISPA app = free download

ESRI GIS online license = $100

ESRI GIS software = *optional*

J. Clayton, NYSDEC

Behavioral Change

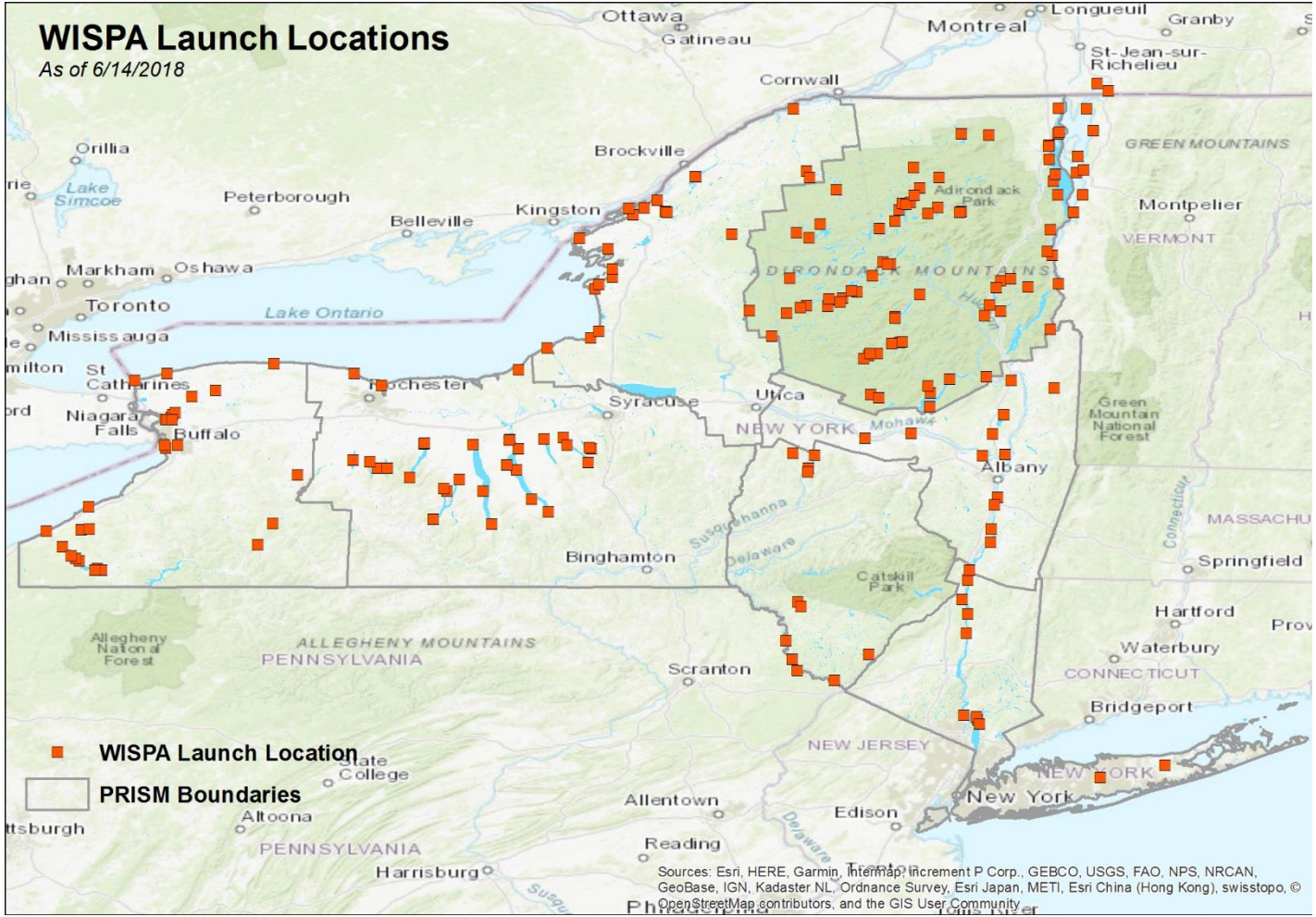
- Working with behavioral psychologist
- Tweaking our existing messaging
- Stewards providing link to pre-behavioral change implementation survey
- Asking for a commitment at end of WISPA survey

J. Clayton, NYSDEC

Behavioral Change

- Boaters who make a commitment get swag!!

More details about WISPA….



WISPA

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What Kind of Data Is Collected?

- When did the inspection occur?
- Where the boat launch and the steward were located?
- Was the watercraft launching or retrieving?
- What type of watercraft was inspected?
- Did the operator agree to an inspection?
  - ➢ If so, were any species/debris detected (if so, which species)?
- Was a Watercraft Decontamination performed?

How Does WISPA Work?

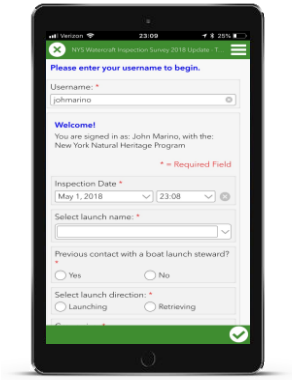
- Field data collection survey application (Survey123)
  - Requires internet connectivity for setup
  - Works offline once configured for data collection
  - Internet connectivity required for data upload
- Central GIS database (ArcGIS Online)
- Data Dashboard (ArcGIS Online)
- Data Editor Maps (ArcGIS Online)

How WISPA Works

WISPA Data Collection

Survey123

- *Tool which boat launch stewards use to collect and upload data*

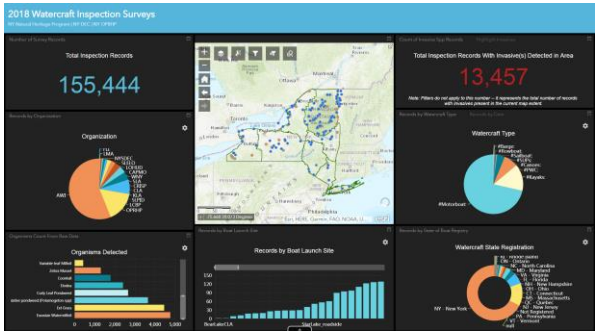


iPad Photo Credit: Wikimedia Commons user *Netspy*

ArcGIS Online
NYSDEC

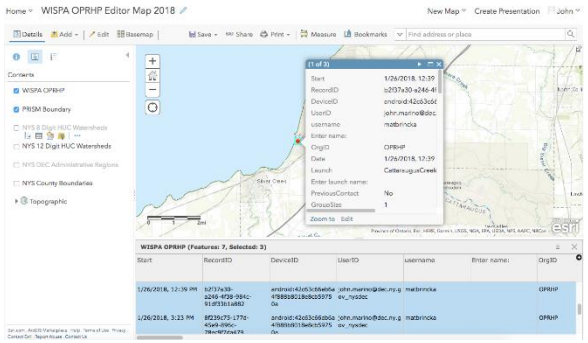
Dashboard

- *Viewable by program coordinators*
- *Allows for view-only of all state data*



Editor Map

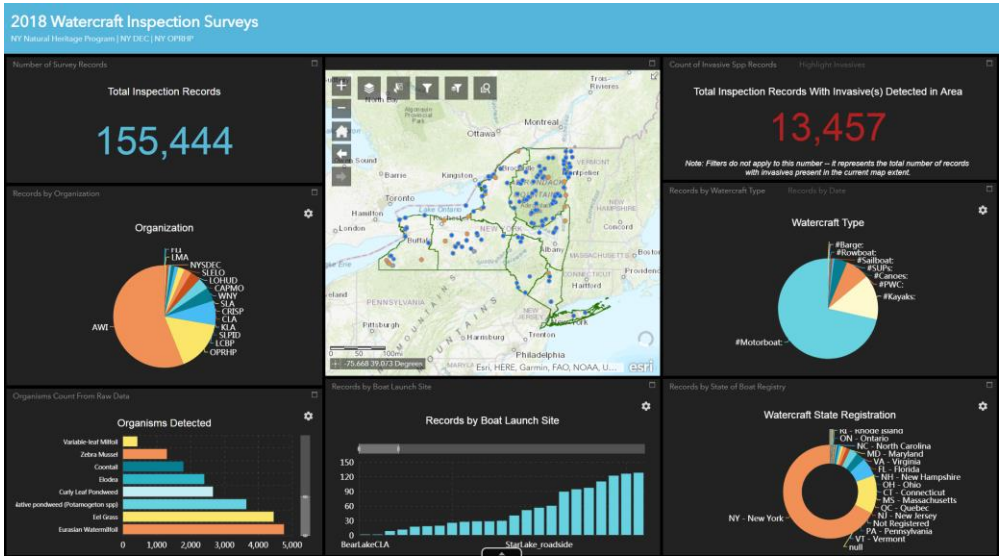
- *Configured for each organization*
- *Allows for data editing of own organization's data*



Data Viewing

Dashboard

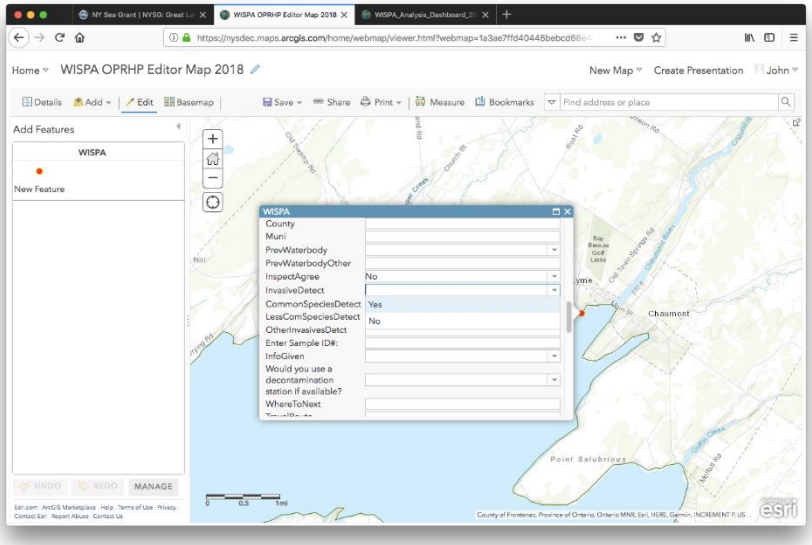
- At-a-glance view of statewide data
- Filter by date or organization
- Data in charts and graphs match the data visible in the map



Data Editing

Editor Map

- View and edit all data submitted by stewards by organization
- Export data to different formats for detailed/custom analysis



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WISPA Data Results 2018

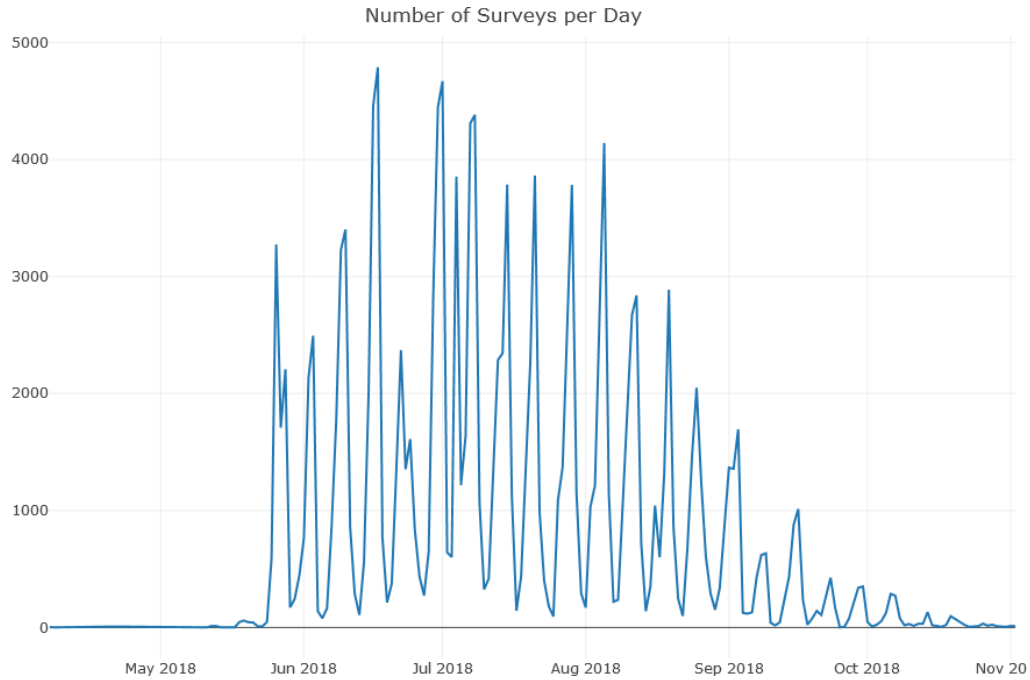
As of Dec. 20, 2018

- 156,849 records collected
- 14,436 records with organisms detected (9.20% of total)
- Watercraft:
  - 71.5% motorboat
  - 14.5% kayaks
  - 7.7% personal watercraft
  - 6.3% all others

- Top species detected
  1. Eurasian Watermilfoil (*Myriophyllum spicatum*)
  2. Eel Grass/Water Celery (*Vallisneria americana*)
  3. Native pondweed (*Potamogeton* spp.)
  4. Curly Leaf Pondweed (*Potamogeton crispus*)
  5. Elodea (*Elodea* spp.)

WISPA Data Results 2018

Inspection Date



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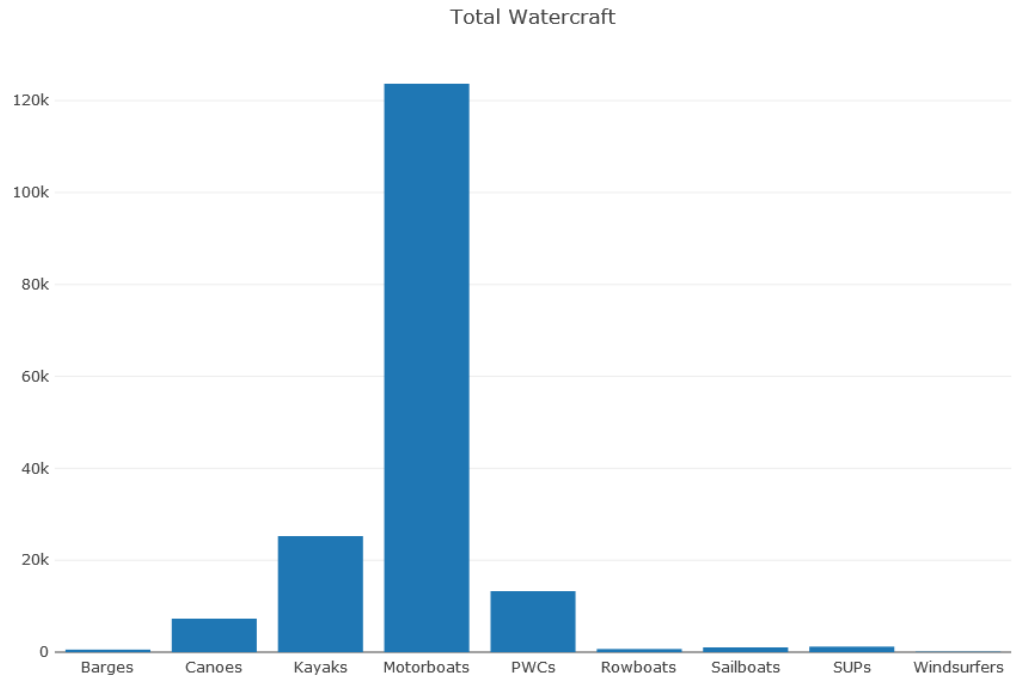
WISPA Data Results 2018

Watercraft Type



Barges	567	0.3%
Canoes	7,303	4.2%
Kayaks	25,269	14.6%
Motorboats	123,674	71.4%
PWCs	13,276	7.7%
Rowboats	695	0.4%
Sailboats	1,031	0.6%
SUPs	1,199	0.7%
Windsurfers	113	0.1%

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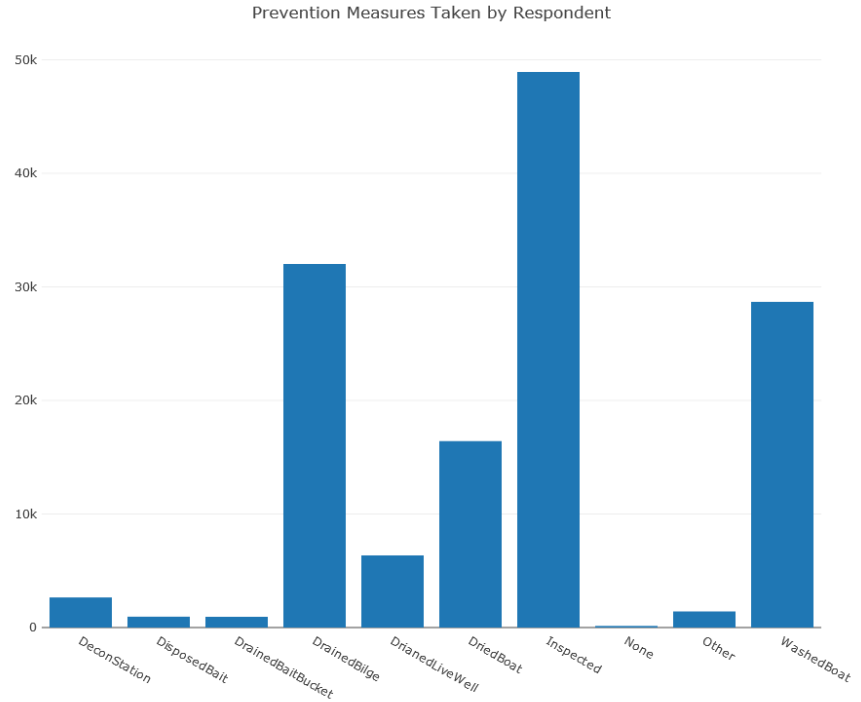
WISPA Data Results 2018

AIS Spread Prevention Measures Taken (As Reported By Watercraft Operator)



Decontamination Station	2,649	1.9%
Disposed Bait	952	0.7%
Drained Bait Bucket	942	0.7%
Drained Bilge	32,009	23.1%
Drained Live Well	6,352	4.6%
Dried Boat	16,413	11.9%
Inspected	48,922	35.3%
None	142	0.1%
Other	1,418	1.0%
Washed Boat	28,680	20.7%

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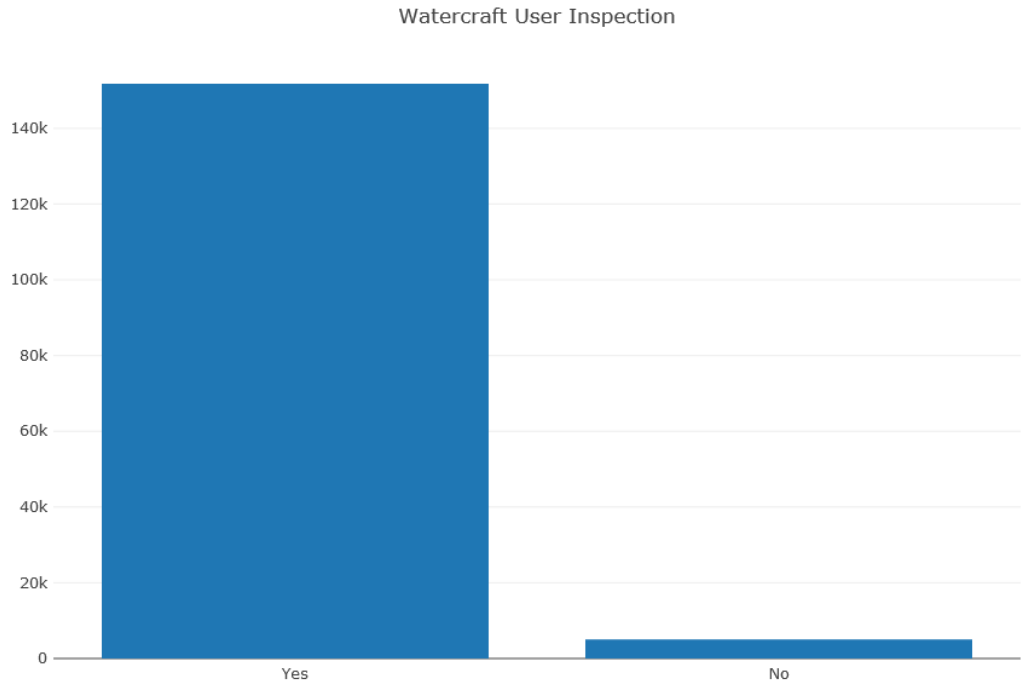
WISPA Data Results 2018

Did The User Agree To An Inspection?



Yes	151,771	96.8%
No	5,028	3.2%

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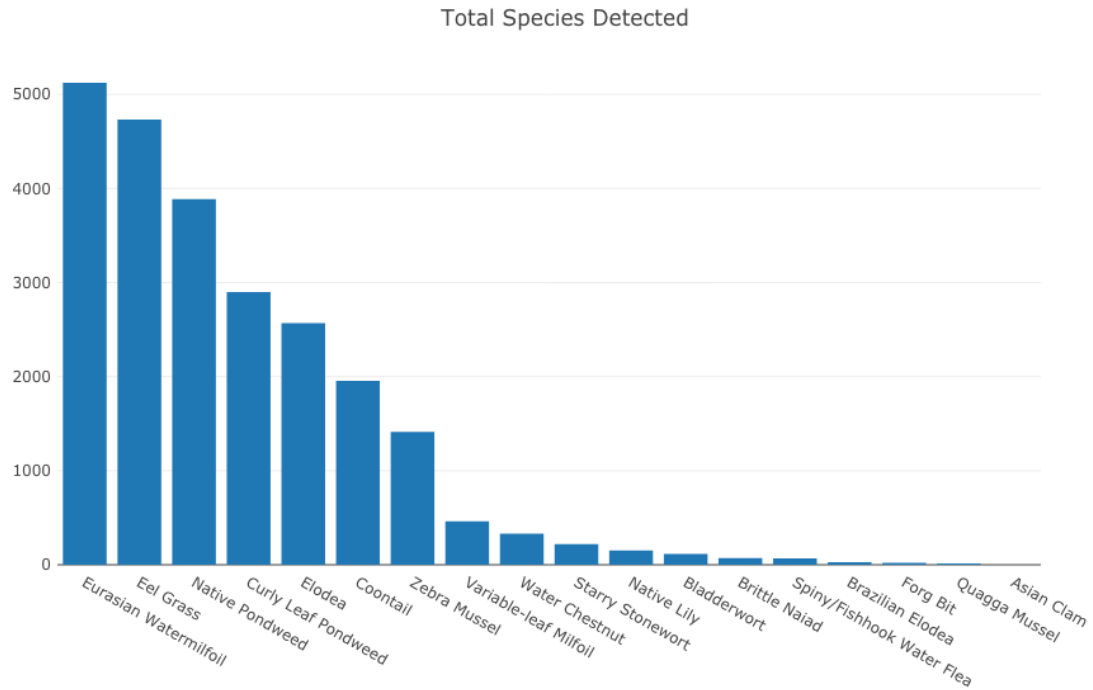
WISPA Data Results 2018

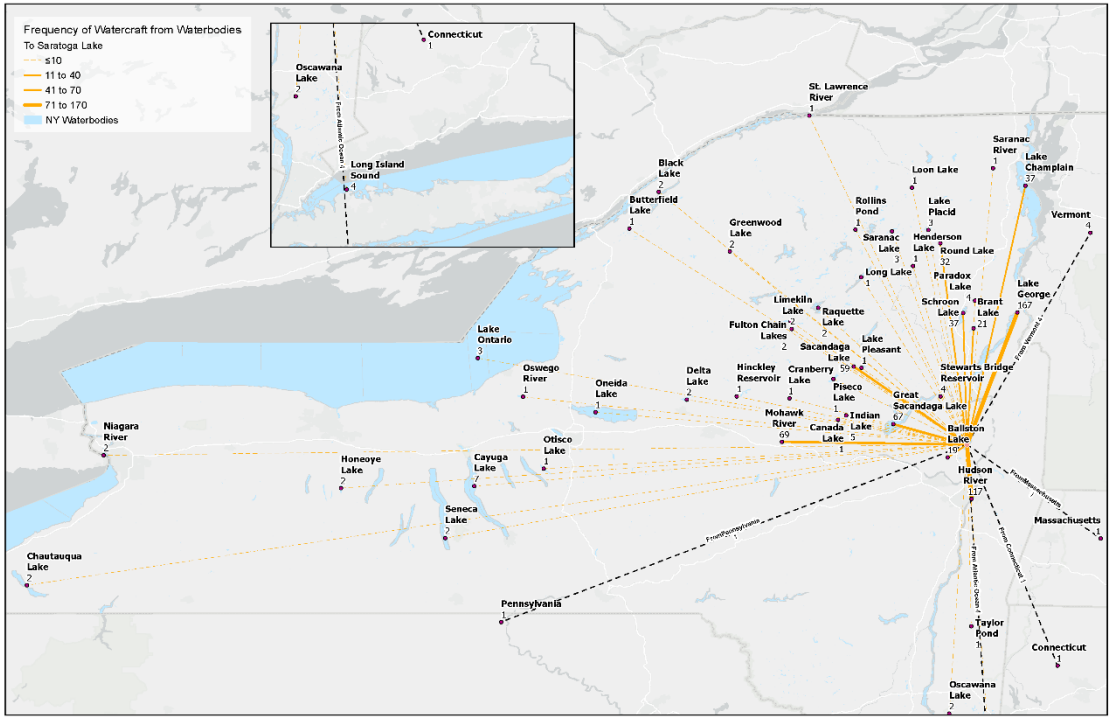
Species Detected



Eurasian Watermilfoil	*Myriophyllum spicatum*	5,124	21.29%
Water Celery/Eel Grass	*Vallisneria americana*	4,734	19.67%
Native Pondweed	*Potamogeton* spp.	3,887	16.15%
Curly Leaf Pondweed	*Potamogeton crispus*	2,899	12.05%
Elodea	*Elodea* spp.	2,569	10.68%
Coontail	*Ceratophyllum demersum*	1,954	8.12%
Zebra Mussel	*Dreissena polymorpha*	1,413	5.87%
Variable-leaf Milfoil	*Myriophyllum heterophyllum*	462	1.92%
Water Chestnut	*Trapa natans*	332	1.38%
Starry Stonewort	*Nitellopsis obtusa*	219	0.91%
Native Lily	Unknown *Nymphaeaceae*	152	0.63%
Bladderwort	*Utricularia* spp.	115	0.48%
Brittle Naiad	*Najas minor*	72	0.30%
Spiny/Fishhook Water Flea	*Bythotrephes longimanus*	68	0.28%
Brazilian Elodea	*Egeria densa*	27	0.11%
Forg Bit	*Hydrocharis morsus-ranae*	19	0.08%
Quagga Mussel	*Dreissena bugensis*	15	0.06%
Asian Clam	*Corbicula fluminea*	1	0.00%

WISPA Data Analysis

“Spider” Maps



Visualization of the waterbodies survey takers reported as last visiting.

Created using ArcGIS Pro.

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WISPA Data Analysis

“Hits” Analysis

- Opportunity to join iMapInvasives data to WISPA data
- Highlights areas in which aquatic invasive species are potentially under-reported in iMapInvasives

2019 and beyond

- Expect 300,000 records this coming season
- Need to figure out where to archive each season's records
- May need full-time staff person dedicated to this project
- Providing results of Hits Analysis to PRISMs (Partnerships for Regional Invasive Species Management)

Thank you!

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Forest Swaciak, current intern and SUNY Albany M.S. Candidate

The NY Natural Heritage Program is a partnership between the NYS Department of Environmental Conservation (NYSDEC) and the State University of New York College of Environmental Science and Forestry (SUNY ESF).

iMapInvasives
Sharing information for strategic management

New York Natural Heritage Program

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